

A replication study of the relationships between depressive symptoms, behavioral activation and avoidance depending on gender.

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Behavioral activation is a well-established empirical treatment of depression focusing on two psychological processes that are activation and avoidance (Ekers et al., 2014). Little is known about the relations between depressive symptoms and these two psychological processes. Then, this study investigates the predictive value of behavioral activation and avoidance on depressive symptoms. Depression seems to be characterized by gender differences (Parker & Brotchie, 2010) and the relationships between activation, avoidance and depressive symptoms seem characterized by gender differences (Wagener, Baeyens & Blairy (2016). The present study aims to replicate these results.

Importance of replication in Psychological science (Pashler & Wagenmakers, 2012)

Method and Results

N = 316 adults who completed self-report scales :

- Depressive symptoms (BDI-II) (Beck, Steer & Brown, 1996)
- Behavioral activation (BADS-SF) (Manos, Kanter & Luo, 2011)
- Behavioral avoidance (BADS-SF) (Manos, Kanter & Luo, 2011)

| | Female | Male | t | p |
|-------------------------------|--------|------|-------|-----|
| Age | 33 | 32 | -.44 | .65 |
| Level of education (in years) | 14 | 14 | .69 | .49 |
| Depressive mood (BDI-II) | 10 | 9 | -1.19 | .23 |
| Behavioral activation | 13 | 14 | .84 | .40 |
| Behavioral avoidance | 4 | 3 | -1.65 | .10 |

* $p < .05$

T- tests on BDI-II symptoms:

Benjamini Hotchberg correction applied

As in initial study,

Female > Men for sadness $t(314) = -2.27, p = .02$

Female > Men for loss of interest in sex $t(314) = -2.73, p = .006$

Multiple regression analyses:

Benjamini Hotchberg correction applied
Z score transformation

As in initial study,

- ❖ Behavioral activation negatively predicted a majority of depressive symptoms in both gender (all $p < .01$)
Except : decrease of sleep and loss of interest in sex
- ❖ Behavioral avoidance positively predicted a majority of depressive symptoms in both gender (all $p < .01$)
Except : increase of sleep

Some gender differences were reported in our study for some symptoms. However, results were non consistent with the initial study.

| Category | Subcategories | N (%) |
|-------------------|---|--------------|
| Gender | Female | 199 (62.97%) |
| | Male | 117 (37.03) |
| Marital status | Single | 206 (65.19%) |
| | In a relationship (married/cohabiting with partner) | 82 (25.95%) |
| | Separated/Divorced | 27 (8.54%) |
| | Widowed | 1 (0.32%) |
| Children | 0 | 192 (60.76%) |
| | >1 | 124 (39.24%) |
| Employment status | Student | 79 (25%) |
| | Working | 196 (62.03%) |
| | Unable | 9 (2.85%) |
| | Stay-at-home mother/father | 5 (1.58%) |
| | Nonworking | 25 (7.91%) |
| Medication | Retired | 1 (0.32%) |
| | Antidepressant | 10 (3.16%) |
| | Anxiolytic | 10 (3.16%) |
| | Antipsychotic | 1 (0.31%) |
| Past EDM | 0 | 186 (58.86%) |
| | 1 | 78 (24.68%) |
| | > 1 | 52 (16.45%) |

Discussion

Depression is characterized by symptoms differences in function of gender (Kornstein et al., 2000 ; Parker & Brotchie, 2010). Only two symptoms are significantly different as a function of gender (sadness and loss of interest in sex) as in initial study and two symptoms are marginally different (fatigue and past failure).

=> This part of our study is only a partial replication of the original study of Wagener et al. 2016.

Activation and Avoidance are good predictors of a majority of depressive symptoms

These results :

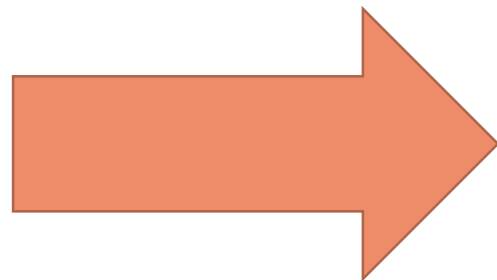
- ❑ Suggest that activation and avoidance are relevant therapeutic targets in depression care.
- ❑ Support behavioral models of depression (Lewinsohn & Amenson, 1978)
- ❑ Support treatment focusing on these two processes, as behavioral activation program (Dimidjian et al., 2011)

However, some symptoms (e.g. sleep disturbance) are not well predicted by activation or avoidance and may require parallel intervention.

The relationships between activation, avoidance and depressive symptoms seem characterized by gender differences

However, results were non consistent with the initial study.

=> This part of our study does not replicate the results of the original study of Wagener et al., 2016.



In the actual context of replication crisis, these results highlight the need of replication

